



### Overview:

The titanium wheel studs serve multiple purposes: reduced weight and increased strength over OEM; coated surface to reduce the possibility of galling, a bullet tip to ease the nut threading process, and the option of extended lengths. These studs are a superior option for improved durability over the OEM mild steel studs.

### Compatibility:

The wheel studs will fit any Viper 1992-2017.

The studs can be installed using a Lisle 22800 tool and extra open ended nut, both are available through DSE. A press is the ideal way to remove and install the lug nuts.



***Studs of each length installed on a Viper hub aside OEM studs for comparison***

### Construction:

A high-strength forging of 6AL-4V Titanium with rolled threads.

Just like steel, titanium may gall (cold weld), however, these studs and the DSE titanium lug nuts have been coated with a durable Teflon-infused coating to greatly reduce the risk of this. Further reduce the risk of galling by not using an impact wrench to tighten or install the lug nuts on the studs, especially when hot. The possibility of galling is increased with temperature, speed, and load. This may be a significant reason for breakage of the OEM studs, along with their mild steel construction.

### Weight:

Although longer than OEM, each length stud provides a weight savings over the OEM studs.

### Ordering Information:

<http://dougshelbyengineering.com/Viper.html>

DSE-LN-TI-002: Titanium Wheel Stud, OEM 50mm Length (Requires Open Ended Lug Nuts)

DSE-LN-TI-003: Titanium Wheel Stud, Longer 63mm Length (1/2" Longer than OEM; requires Open Ended Lug Nuts)

DSE-LN-TI-004: Titanium Wheel Stud, Longer 75mm Length (1" Longer than OEM; requires Open Ended Lug Nuts)

### Installation Guide:

- Follow the instructions for stud replacement in the service manual to remove and replace the wheel studs.
- Tools such as the Lisle 22800 tool mentioned above and a modified J-45270 Wheel Stud Remover (or similar tools) can make installation easier. It is not necessarily recommended to pound the OEM studs out with a hammer as wheel bearing damage may result.
- If using the Lisle 22800 tool for installation it is a good idea to use additional anti-seize during stud installation and to carefully limit use of the impact wrench to prevent buildup of heat or spinning the lug nut too quickly.
- DSE will install studs on new wheel hubs with or without ceramic bearings, please contact for details.

### **Usage Guide:**

- While the Teflon coated studs and lug nuts are less prone to galling than the OEM versions, hand tightening lug nuts with a torque wrench is still recommended to preserve the finish. Do not use an impact wrench.
- Take caution to avoid damage due to worn/damaged studs or damage due to over-torque or incorrect installation.
- The coating provides a reduced-friction surface similar to anti-seize and therefore requires a torque adjustment to maintain the intended force. Torque the lug nuts to ~80% of the recommended torque spec (roughly 80 ft-lbs for Vipers – check torque specs for your model year).

### **Inspection and Maintenance:**

- As with any lug nut, check the torque again after the first drive to ensure they are still tightened to spec.
- On track days check the torque after each session.
- Periodically inspect the coating on the threads. If significant damage or wear of the coating occurs over time use Permatex Anti-Seize or equivalent to prevent galling.
- Periodically inspect the wheel studs for signs of wear or damage. The stud should be immediately replaced at the first sign of physical damage to the threads or body of the stud.

### **Thank you for your purchase!**

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